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Section 531: Using the Bardahl Formula to Determine Reasonable Accumulations of Working Capital for a Service Company

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NOTES

SECTION 531: USING THE *BARDAHL* FORMULA TO DETERMINE REASONABLE ACCUMULATIONS OF WORKING CAPITAL FOR A SERVICE COMPANY

I. The Present State of § 531

There has always been an impressive temptation to utilize the tax advantages of the corporate form as a veritable Trojan horse to sneak individual income past the high walls of individual tax rates. One of the methods of accomplishing this is by accumulating corporate earnings and profits. Under this approach, shareholders forego immediate personal income so that the corporation's profits will accumulate and inflate the book value of their stock. This stock can then be sold and taxed at the lower capital gains rates or transferred in a tax-free merger for the more marketable securities of a publicly traded corporation. The stock could also simply be held for ultimate transfer at death, in which case it avoids even the capital gains tax.

To discourage such practices, the Internal Revenue Code from an early date has imposed a penalty tax on excess accumulations of corporate earnings and profits for the purpose of avoiding the individual income taxes of the shareholders.[1] This penalty tax now stands at 27.5% of the first $100,000 of such excess accumulation and 35.5% on anything over that.[2] The tax is levied on the corporation in addition to the normal corporate taxes. If this penalty by itself fails to dissuade, there remains the threat of a corporate derivative action by minority shareholders against those persons causing the corporation to be subjected to the accumulated earnings tax.[3] Thus, a controlling shareholder directing his corporation to accumulate stands not only to lose his share of the potential income, but further to be forced to reimburse the corporation for the amount of the tax. The practice of tax-avoidance accumulation, therefore, becomes less a loophole than a noose.

Normally, however, the practice of capital accumulation is less a tax-avoidance device than a business necessity. Companies accumulate capital for many reasons, including financing large outlays for production facilities, meeting operating expenses until income is realized, meeting unexpected contingencies, and buying other companies. Although other forms of financing are available, such as bank loans, bond sales, and stock issuance, they do not offer the inexpensiveness, simplicity, and availability of self-financing through capital accumulation. In addition, a company's ability to obtain outside financing is often

1 The present accumulated earnings tax has its antecedents in the Revenue Act of 1913 (38 Stat. 166). In 1916, the term "fraudulently" was removed from original language regarding the tax avoidance purpose. Although the original section levied the penalty tax directly on the shareholders, in 1921 the present practice of placing the tax directly on the offending corporation was adopted and its constitutionality upheld in Helvering v. National Grocery Co., 304 U.S. 282 (1938).

2 INT. REV. CODE OF 1954, § 531.

3 *See* Mahler v. Trico Prods. Corp., 296 N.Y. 902, 72 N.E.2d 622 (1947); and Note, *Derivative Actions Arising From Payment of Penalty Taxes Under Section 102*, 49 COLUM. L. REV. 394 (1949).

a function of the company's working capital position. The Code seeks only to prohibit abuse of this legitimate business practice, but in so doing has the effect of forcing businessmen to justify any accumulations. The largest problem thus created by section 531 is how to apply it with sufficient certainty so as not to unduly "chill" the utilization of capital accumulation for legitimate business purposes.

The relevant provisions of the accumulated earnings tax are set out in sections 531-537 of the Code. In deciding whether the penalty tax should be imposed, the key question is whether the corporation was, in the language of section 532,

> formed or availed of for the purpose of avoiding the income tax with respect to its shareholders or the shareholders of any other corporation, by permitting earnings and profits to accumulate instead of being divided or distributed.

In *United States v. Donruss Company*,[4] the Supreme Court held that this tax-avoidance purpose need not be shown to have been the dominant, controlling, or impelling reason for the accumulation, but rather only need have been present as *one* of the motives in order to subject the corporation to the tax. This was true even if the other considerations were of greater influence to the taxpayer's decision. Although in theory *Donruss* does not mean that mere knowledge of beneficial tax consequences is all that is necessary to show the tax-avoidance purpose, it may well be difficult in practice for courts to draw this distinction. In order to prevail on the defense of "pure motives" in the future, the taxpayer may need to show that there were either no beneficial tax consequences whatsoever, or that, if there were, he was ignorant of them.[5]

The question of intent has seldom revolved around presence or absence of pure motives. Rather, it has usually been decided on the basis of whether "reasonable needs" for accumulation exist, since section 533(a) makes a finding of accumulations beyond such needs "determinative" of the intent to avoid shareholder taxes unless the taxpayer can prove to the contrary (i.e., show "pure motives") by the preponderance of the evidence. *Donruss* simply makes it less likely that the taxpayer will be able to obtain this preponderance and thus makes the "reasonable needs" test more than ever the essence of the accumulated earnings tax.

Suspending the heavy sword of the section 531 tax by the thin thread of the "reasonable needs" test has never pleased those businessmen who must work underneath it. The fear that merely bad business judgment could occasion the falling of the penalty tax may partly explain why on occasion such strong epithets as "the seeds of an economic and social cataclysm"[6] have been leveled against section 531.

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4 393 U.S. 297 (1969).

5 Exactly this was done recently in Simons-Eastern Co. v. United States, 354 F. Supp. 1003 (N.D. Ga. 1972), where an engineering consulting company's officer/shareholders were extremely busy professionals in engineering fields without tax counsel and in sufficiently low tax brackets so as not to gain any benefits from an accumulation. The court also considered the tests for unreasonable accumulations suggested by Regs. 1.537-2(a)(c).

6 Simons, *The Gathering Storm of Section 531 of Our Tax Law*, 44 TAXES 528 (1966).

If the consequences of section 531 have been not nearly so dramatic, it is due to several factors. Perhaps the most significant of these is that the greatest part of American industry is publicly owned. The divorce of control from ownership which is usually a trait of such companies largely frees them from the suspicion of being manipulated for the benefit of their shareholders. Until recently, the only public corporation subjected to the tax was distinguishable by its being 70% owned by management.[7] That even a publicly owned corporation with dispersed ownership might be susceptible to the tax, however, was indicated by the recent Tax Court decision in *Golconda Mining Corporation,*[8] where a corporation with 2,900 stockholders (whose officers and directors collectively held no more than 16% of the stock) was subjected to the tax. But here the fact of public ownership was neutralized by the dominant manager's manipulation of dividend policies for his own substantial tax saving. In this sense, therefore, *Golconda* merely elaborates the amount of control and ownership necessary to make accumulations suspect. On the other hand there is language in *Golconda* to the effect that the company's manifestations to prospective shareholders that the company would be operated as an accumulation vessel played some part in the court's determination of intent. This point could be quite significant to publicly held "growth" stock companies intending to pursue such a course of action.

Another significant factor mitigating the harshness of section 531 is the section 535(c) accumulated earnings credit of $100,000, which gives corporations a reasonable margin for error.

Finally, even though the Code does not define "reasonable needs," there has evolved a body of case law and regulations which provide numerous examples of what constitute "reasonable" accumulations which are available to guide the businessman in making his decisions. These have included accumulations for: (1) meeting competition,[9] (2) funding a pension plan,[10] (3) reserves against risks,[11] (4) litigation reserves,[12] (5) threat of strikes,[13] (6) loss of customer,[14] (7) relocation,[15] (8) self-insurance,[16] (9) surety bond requirements,[17] (10) flood damage reserve,[18] (11) inflation reserve,[19] (12) satisfaction of proposed § 531 tax deficiency,[20] (13) expansion of plant,[21] (14) loans to suppliers and custom-

7 Trico Prods. Corp. v. Comm'r, 137 F.2d 424 (2d Cir. 1943).
8 58 T.C. 139 (1972).
9 John P. Scripps Newspapers, 44 T.C. 453 (1965).
10 Bremerton Sun Publ. Co., 44 T.C. 566 (1965).
11 Smoot Sand & Gravel Corp. v. Comm'r, 274 F.2d 495 (4th Cir. 1960).
12 Casey v. Comm'r, 267 F.2d 26 (2d Cir. 1959).
13 Smokeless Fuel Co., ¶ 43,425 P-H Tax Ct. Mem. (1943).
14 L. R. Teeple Co., 47 B.T.A. 270 (1942).
15 *Id.*
16 Bradford-Robinson Printing Co. v. United States, 1 AFTR2d 1278 (D. Colo. 1957).
17 Vuono-Lione, Inc., ¶ 65,096 P-H Tax Ct. Mem. (1965).
18 Magic Mart, Inc., 51 T.C. 775 (1965).
19 Delaware Trucking Co., Inc., CCH Tax Ct. Mem. 1973-29 (1973).
20 Rev. Rul. 70-301, 1970-1 C.B. 138 (1970).
21 Treas. Reg. § 1.537-2(b) (1957).

ers,[22] (15) acquisition of businesses,[23] (16) retirement of bona fide indebtedness,[24] and (17) working capital.[25]

This article will specifically be concerned with how this last category, working capital, is determined with regard to service corporations.

II. Determination of Working Capital

Effective administration of section 531 requires the formulation of a simple, accurate test for reviewing or justifying corporate accumulations of working capital. Although not defined in the Code, working capital is essentially the amount of liquid funds necessary to operate the business, less any extraordinary payments already provided for. The amount necessary will depend on the corporation's cash flow, since production and sale of products will generate capital which can then be spent toward further production, and thus all that will be needed for working capital will be an amount sufficient to operate the business until such capital is generated. This will vary between firms.

From approximately 1948[26] to 1960,[27] the prevalent test for determining working capital needs was the so-called "one-year" rule, which assumed that there would be no income for one year and therefore allowed sufficient capital to meet operating expenses for this period. This rule, however, was completely arbitrary and failed to take into account differences in business turnovers. Moreover, it did not distinguish between fixed and variable expenses, the latter of which could be reduced by the taxpayer when sales decreased.

After briefly embracing a test based on the annual operating cost being less than surplus,[28] the courts followed the lead of the Tax Court's 1965 decision in *Bardahl Manufacturing Corporation*[29] and approved a test based upon determining a company's "operating cycle." This cycle is simply the time it takes for the cash converted into inventory to return to the company from receivables as cash again. At that point this cash will once more be available to begin a new production cycle. The *Bardahl* formula, once it has determined this period, apportions the entire expenses of the year to it. This amount will be unavailable for distribution because it is required to continue operations. The calculations are as follows:

$$(1)\quad \frac{\text{Peak period (or average) inventory}}{\text{Annual cost of goods sold}} = \text{Inventory turnover period ("production" cycle)}$$

$$(2)\quad \frac{\text{Peak period (or average) accounts receivable}}{\text{Annual sales}} = \text{Receivables turnover period ("collection" cycle)}$$

22 *Id.*
23 *Id.*
24 *Id.*
25 *Id.*
26 J. L. Goodman Co., 11 T.C. 530 (1948).
27 Dixie, Inc. v. Comm'r, 277 F.2d 526 (2d Cir. 1960) (refusing to follow the one-year rule).
28 *See* Sterling Distributors v. United States, 313 F.2d 803 (5th Cir. 1963); John P. Scripps Newspapers, 44 T.C. 453 (1965); Bremerton Sun Publ. Co., 44 T.C. 566 (1965).
29 24 T.C.M. 1030 (1965).

(3) $\frac{\text{Peak period (or average) accounts payable}}{\text{Annual sales}} = \begin{matrix}\text{Payables turnover}\\ \text{period}\\ \text{("credit" cycle)}\end{matrix}$

(4) Production cycle + Collection cycle — Credit cycle = Average Operating Cycle

(5) Average Operating cycle × (Cost of Goods Sold + Adjusted Operating Expenses) = Working Capital for 1 Cycle.

One of the underlying assumptions of this formula is that the cash returning from receivables to the company will be sufficient to begin another cycle. Otherwise, it is clear that a greater accumulation will be necessary. While the *Bardahl* formula has been used with significant success in cases involving manufacturing corporations, however, application of the formula directly to service companies may create serious problems owing to the amount determined being insufficient to get the company through a further cycle.

III. Problems in Adapting the *Bardahl* Formula to Service Companies

The basic difference between manufacturing companies and service companies is that the former sell *tangible* products while the latter sell *intangible* ones. The *Bardahl* formula, however, only measures a production cycle based upon the turnover of *tangible* inventory. Because of this, the production cycle of service companies without tangible inventory will be neglected if the *Bardahl* formula is strictly applied. This omission will, in turn, seriously distort the working capital needs of the corporation. An alternative method of measuring the production cycle for such service companies must therefore be sought.

An obvious alternative to use for a service company is the analogy of "time as inventory" since the true inventory of a service corporation is its human resources which are paid for according to the time they are employed. This, of course, is an inventory with some distinctive characteristics. It costs nothing to maintain, requires being used steadily whether needed or not, cannot be repossessed if its purchaser fails to pay for it, and converts into the finished product with varying degrees of efficiency.

This "inventory" may be measured by salaries and plugged into the traditional *Bardahl* formula for the production cycle as follows:

$$\frac{\text{Peak period (or average) salaries}}{\text{Annual Salary Expense}} = \text{Salary Turnover Period}$$

An equally valid way of arriving at this figure would be to simply inquire of the company bookkeeper how often the company pays its staff.

But will such a modified formula work? In one recent case, it was argued that this period was the correct replacement for the traditional *Bardahl* production cycle based on inventory.[30] The court, while ultimately not accepting this argument, did admit to being "intrigued" with it. Such a facile analogy is, however, erroneous. The length of this period is determined by company policy and as such is absolutely arbitrary. It in no way reflects the measure of time

30 Simons-Eastern Co. v. United States, 354 F. Supp. 1003 (N.D. Ga. 1972).

actually required to complete a job. A service company may complete several production cycles during one salary cycle, or may go through several salary cycles before completing a production cycle and billing for services performed.

The traditional *Bardahl* production cycle formula for manufacturing industries also measures only the turnover of inventory. But when tangible inventory turns over, it is because it is being sold. The intangible inventory of time possessed by a service corporation, on the other hand, turns over regardless of whether it is being used productively. Since the key concept of the traditional *Bardahl* formula involves determining when the company will realize cash from operations such that it will be able to continue without need for accumulating capital, a better analogy for a service company would take into consideration how long it takes to perform services so that the company may bill for them and be reimbursed. Until such reimbursement is forthcoming, a service company will need to continue operations by using accumulated working capital. To base a cycle for a service industry on an arbitrary fixed expense, such as salary payment frequency, is as clearly wrong as basing the production cycle of a manufacturing concern on a fixed expense such as rent or, for that matter, salary payment frequency. What is important is the *frequency of reimbursement.*

IV. Alternative Service Company Approaches Considered

A. *The Traditional* Bardahl *Approach*

There are many service corporations using material inventories in the performance of their business. For example, a pest control service company will need to use insecticides, a construction firm will require building materials, and a newspaper will employ paper and ink. If the turnover of such inventory is closely related to the amount of services being performed, the traditional *Bardahl* production cycle formula will fulfil its function of indicating how long the "reimbursement" cycle will take, and may thus be used with justification. It need not matter how large a part of the total expenses are spent on this inventory, but rather how close the relationship between its turnover and reimbursement is. To carry this rationale to the extreme, the cycle might be based solely on the turnover of the office forms used to bill clients, although this would probably not be practical because of the likelihood that waste of such forms or the calculated abuse of them would skew the cycle one way or another.

B. *The* Bardahl/*Arbitrary Approach*

This approach simply computes the traditional *Bardahl* formula based on whatever cycles (i.e., production, collection, or credit) are present and then adds to this figure an arbitrary amount. Although at first blush this appears to allow accumulations greater than those required for one *Bardahl* operating cycle, this may not be the case when the service company has no inventory cycle whatsoever. When such an inventory cycle cannot be computed, the entire production cycle of the company is omitted even though it exists. In place of a true reflection of the company's capital needs for production, therefore, it is left

only with an arbitrary amount. It is analogous to a manufacturing concern with an inventory turnover cycle of four months instead being allowed working capital sufficient for only 60 days.

The Fourth Circuit recently used such an approach in deciding *Simons-Eastern Company v. United States*.[31] The case involved an engineering consulting firm having no inventory. After computing the traditional *Bardahl* formula, the court simply added an additional accumulation sufficient to meet 60 days of professional salaries. The theory behind this was that, should business decline, this would be enough time to regain the former level of income or make the decision to lay off the productive assets of the firm, namely, its "brainpower."

In allowing this additional accumulation, the court evinced a certain sensitivity to the problems faced by a service company. The retention of the professional staff, it was reasoned, would be necessary in order to attract and service new business. To require the firm to dismiss such talent at the first sign of slackening business would only initiate a vicious circle in which the company would be increasingly disadvantaged in regaining its former position.

Yet the court's solution was less than satisfactory. No attempt was made to compute the time it took for the company to complete a job so it might be billed out. If this in fact was over 60 days, the accumulation allowed will not be sufficient for the company to continue operations.

The *Bardahl*/Arbitrary formula, therefore, is simply a return to the rationale of the former "one-year" rule, and shares all the faults of that formula. While it may be highly prejudicial to a service company with no inventory, its purpose as a "contingency reserve" may be realized in cases where there is an inventory on which to base the computation of a production cycle. Such a reserve may be justified for a service company owing to the almost complete absence in such firms of variable expenses which may be trimmed as business declines. These companies are in the position of not only having high fixed expenses, but of having these expenses also represent the assets of the firm. Because reduction of the professional staff of a service corporation is akin to a manufacturing firm selling its plant, courts should be extremely sensitive toward allowing reserves to meet staff salary expenses for such companies.

C. *The "Time to Complete" Approach*

As pointed out earlier, it is less important to find out how often a service company incurs expenses than to determine how often it completes jobs and is able to recover funds. At this point accumulated working capital will be unnecessary to continue operations. To find this production cycle for service industries, it is necessary to compute the length of time required to complete an average job. A simple formula for this is as follows:

(1) Number of work hours in year $\times$ Number of staff
= Total available staff hours

31 *Id.*

$$(2)\quad \frac{\text{Total available staff hours}}{\text{Total number of projects billed}} = \text{Average hourly staff time on project}$$

$$(3)\quad \frac{\text{Average hourly staff time on project}}{\text{Number of work hours in year}} = \text{Production Cycle}$$

There are, however, several problems with this formula. To begin with, it assumes that projects will all neatly begin and end during the year, while in fact many will run over from one year to another. Furthermore, the formula will not be an accurate reflection of a true cycle if there are great disparities in the lengths of projects, such as many small ones combined with a few large ones. In such cases, the realities of the situation will demand that the corporation have sufficient capital accumulation to carry it through these longer cycles, since the funds generated by the small projects may not be sufficient to do so. Finally, a similar weakness of the formula is its failure to compensate for seasonal fluctuations in business volume. If most of the projects come only late in the year, an accumulation sufficient to carry the company up to this point, then through one cycle, will be necessary.

The first of these problems may be eliminated by including as a fraction the part of any project actually completed during the year even though started in the previous year. As for projects currently in progress but not completed at the end of the year, an estimate should be made of how long the project is likely to take and then that part completed during the year likewise expressed as a fraction of one complete project. This method will, however, only be effective as a minor adjustment. If, for example, no projects are completed within the year, but 50% of the work is accounted for during that period, the company will have no revenue coming in (unless periodic payments are being made)[32] and thus require a full year's accumulation of working capital rather than only six months' worth. If the company's business is highly regular this adjustment need not be made, as the projects carrying over from prior years and being billed in the present year will approximate those being worked on in the present year but not yet billed.

The second problem, regarding projects having disparate lengths, and the third problem, dealing with seasonal business fluctuations, may best be handled by utilizing the "contingency reserve" rationale of the *Bardahl*/Arbitrary approach employed in *Simons-Eastern*. Adjusting such problems on an ad hoc basis preserves the attractive simplicity of the "time to complete" formula. This additional reserve, moreover, can be made less arbitrary if further information is compiled regarding the actual number of hours spent on each project, its date of assignment, and its date of completion. Such information may then be used in support of an additional accumulation reasonably related to the actual facts of the situation.

D. *The "Completion Cost" Approach*

Another way of avoiding the problems of the "time to complete" approach

32 Where periodic payments are made on a job, each segment of the job between payments should be treated as a separate job.

is to use a formula more strictly analogous to the traditional *Bardahl* production cycle computation. So as the time of sale marks the end of the production cycle for a manufacturing concern, the completion of a job is the finish of the production cycle for a service company. The manufacturing company can discover the time required to produce by measuring the turnover of its inventory. A service corporation, on the other hand, does not have such an indicator available. But, by analogy, it can discover its production cycle by using cost information in the following way:

$$\frac{\text{Cost of jobs in progress}}{\text{Cost of jobs completed during year}} = \text{Production Cycle}$$

Just as with the traditional *Bardahl* production cycle computation, either peak jobs in progress or average jobs in progress may be used.

The main problem with the "completion cost" approach is that it can only be used by a company which keeps cost records of jobs in progress or is able to reconstruct such records in the event of a challenge by the Internal Revenue Service.

V. Summary

Service corporations sell intangible products and frequently lack the tangible inventory necessary to compute the production cycle of the *Bardahl* formula. To apply the formula without taking cognizance of this fact will seriously prejudice the company involved since the operating cycle computed will not reflect the actual time required to complete a job so that the customer can be billed.[33] When the entire expenses of the firm are then apportioned to such an unnaturally short operating cycle, the result may be that the company is allowed insufficient working capital to continue operations.

One solution to this problem is to allow the company to accumulate working capital for an additional arbitrary period. This method, however, may still not provide enough cash to continue operations.

Another approach is to compute the average time needed to complete a project so that the customer can be billed. A company whose business is heavier at different times during the year, or whose projects vary greatly in length, will not be able to effectively use this approach unless adjustments for these facts are made. To preserve the simplicity of this approach, an arbitrary allowance based on the information available may be a desirable manner in which to make such adjustments.

Finally, a company with extensive data on the cost of jobs in progress may wish to use a "completion cost" approach strictly analogous to the traditional production cycle computation of the *Bardahl* formula.

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33 If the corporation has payables but not receivables, the additional lack of a production cycle (owing to the *Bardahl* formula's inability to compute one) will produce the incredible result of a *negative* operating cycle being attributed to the company.